WS9.5 The role of daily physical activity on exercise performance in adults with cystic fibrosis

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Objectives: Physical exercise improves outcomes for patients with cystic fibrosis (CF). Data obtained in adult CF patients showed that daily physical activity (PA) at moderate intensity prevented muscle strength deterioration and appeared similar compared to healthy controls. To date, the link between PA and submaximal exercise data obtained during cardiopulmonary exercise testing (CPET) has never been systematically explored in clinically stable adults with CF.
Methods: Sixteen stable CF patients (mean age 33±8SD yrs; FEV_1 2.62±0.66 l; FEV_1 68±15% predicted, BMI 22.1±2.3) and 15 age- and sex-matched healthy controls were studied at rest and during symptom-limited incremental CPET. Measurements were taken at the lactic threshold (LT) and at peak exercise. The 6MWT was also performed. Daily PA was assessed using the SenseWear (SW) Pro3 Armband accelerometer.
Results: Except for peak values, VO2 profile and the VO2 at LT were comparable between CF and controls. No difference was observed in 6MWD between CF and controls. Compared with controls, CF patients had similar values in daily PA at different intensities with higher duration of PA ($p = 0.04$) and higher average of metabolic equivalents ($p = 0.04$).
Conclusion: Submaximal exercise data related to aerobic capacity were comparable between CF patients with mild to moderate lung impairment and healthy controls. Daily PA at home without any different changes in chronic therapy might play an important role in maintaining aerobic fitness in adults with CF. CPET is a valuable tool in assessing aerobic fitness in CF and could be used to detect early changes in PA.

WS9.6 The All Wales Adult Cystic Fibrosis Centre (AWACFC) Virtual Instruction of Exercise With Technology to Enhance Care − VIEWTEC Programme

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Background: The AWACFC cares for patients over a large geographical area with patients often travelling over two hours to attend the centre. We introduced the VIEWTEC Programme to promote, motivate and educate patients in their own homes to exercise regularly by using virtual exercise sessions with a CF Gym Instructor based in the centre.
Method: Hospital approval was granted for an initial pilot in 13 patients. Patient consent was obtained and an information leaflet given. A date/time for each virtual session was emailed with a link-in to join via Cisco Webex internet system.
Results: 13 patients (8 male) participated. Technical difficulties were initially experienced in 9 of 27 sessions and included poor internet reception in some patient areas. All 13 were computer familiar. Feedback was positive and included finding the system of particular benefit in winter months and a saving in travel time and expenses (three patients would have cancelled sessions if they had had to travel). During the group exercise session patients enjoyed peer support. Only one patient thought this was intrusive and made her feel self-conscious but the remaining 12 patients liked the principles of use and felt better motivated.
Nine patients were willing to take part in future group exercise sessions and four preferred one to one sessions. 12 of the 13 wanted to continue virtual exercise sessions.
Conclusion: More virtual exercise sessions will be rolled out trialling Cisco Jabber system with increased patient participation. This demonstrates a practical and beneficial new avenue in motivating patients to engage in exercise without the potential barriers of travel and infection control issues.